

REMARKS

Reconsideration of the present application as amended is respectfully requested. Claims 1, 3, and 10 have been amended. Support for the amendments made to claims 1, 3, and 10 can be found in at least Figures 15-19b and page 24, paragraph [0083] to page 28, paragraph [0092]. Claims 1-4, 6-12, and 14-18 are currently pending.

Claims 1, 3, 10, and 16-18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,026,890 to Akachi in view of U.S. Patent No. 4,830,100 to Kato et al. ("Kato"). Independent claim 1 has been amended to include the features of "wherein the low-profile extrusion includes a first arcuate portion extending from the generally planar portion to the first sealed end, and a second arcuate portion extending from the generally planar portion to the second sealed end, the first arcuate portion and the second arcuate portion forming segments of a generally circular body portion, each of the first arcuate portion and the second arcuate portion having the same generally constant arc radius measured from a common focus point central to the generally circular body portion."

Akachi describes a heat exchanger including a flexible band of light metal which meanders between a high temperature region and a low temperature region. Akachi further describes that the band includes a plurality of longitudinal small holes extending in parallel to one another from one band end to another end, and that the longitudinal holes are connected at each end of the end portions of the band. Akachi further describes that both ends of the band are closed by welding to form a sealed cavity partly filled with a working fluid in partial vacuum.

As acknowledged in the Office Action, Akachi fails to disclose "a generally planar portion for positioning substantially near the at least one heat generating component; a low-profile extrusion having an inner and outer external surface and having a first sealed end and a second sealed end, the low-profile extrusion being curved on itself into a generally toroidal shape such that the second sealed end is disposed generally opposite the first sealed end; wherein the first sealed end and the second sealed end are oriented opposite from the generally planar portion; and a fin structure extends along a portion of the low-profile extrusion excluding the generally planar portion."

Applicant respectfully submits that Akachi fails to teach or suggest at least the features of a low-profile extrusion including a first arcuate portion extending from a generally planar portion to a first sealed end, and a second arcuate portion extending from the generally planar portion to a second sealed end, the first arcuate portion and the second arcuate portion forming segments of a generally circular body portion, each of the first arcuate portion and the second arcuate portion having the same generally constant arc radius measured from a common focus point central to the generally circular body portion as found in independent claim 1 as amended.

Kato describes a heat-pipe device for transferring heat generated by a heat-generating element, having at least one heat-pipe body which is an extrudate of plate-like configuration made of aluminum or its alloy. Kato further describes that the heat-pipe body includes a planar-structure portion which has on one side thereof a flat face to which the heat generating element is directly fixed. Kato still further describes a heat-sink device for cooling a heat-generating element having at least one heat-pipe body including a planar-structure portion and a plurality of passage-defining portions.

Applicant respectfully submits that Kato fails to teach or suggest the aforementioned distinguishing features of independent claim 1 of a low-profile extrusion including a first arcuate portion extending from a generally planar portion to a first sealed end, and a second arcuate portion extending from the generally planar portion to a second sealed end, the first arcuate portion and the second arcuate portion forming segments of a generally circular body portion, each of the first arcuate portion and the second arcuate portion having the same generally constant arc radius measured from a common focus point central to the generally circular body portion. Referring, for example, to Figures 2, 15, and 17 of Kato, the heat pipe bodies described by Kato are of a box-like (square cross section) configuration with rounded corners. Kato fails to teach a low profile extrusion that includes first and second arcuate portions which extend from a generally planar portion to first and second sealed ends, respectively, in which the first and second arcuate portions form segments of a generally circular body portion and have the same generally constant arc radius measured from a common focus point central to the generally circular body portion.

Further, Kato contains no teaching or suggestion of first and second sealed ends being oriented on the low profile extrusion opposite of a generally planar portion that is for positioning near at least one heat-generating component. In the embodiments of the heat-pipe device described by Kato, header pipes 12 and 14 illustrated in Figure 2 and header pipes 211 and 212 illustrated in Figures 15 and 17 are located on the same side of the heat pipe body as the heat generating component. Such a configuration described by Kato is markedly different in operation from that of the present invention. In Kato, the working fluid is vaporized in the lower portions of the heat-pipe body and flows up both sides of the heat pipe body to a condensing region in which both sides of the heat pipe body are fluidly connected in the condensing region. In contrast, the present invention provides for a low-profile extrusion having two sealed ends that form a condensing region of two separate sealed ends that are not connected fluidly connected in the condensing region.

Additionally, in the heat-sink device illustrated in Figures 15 and 17 of Kato, the ends of the heat pipe bodies are connected to each other by way of a header pipe 12. Accordingly, the heat-sink device of Figures 15 and 17 of Kato fails to teach or suggest a low-profile extrusion being curved upon itself such that a second sealed end is disposed generally opposite a first sealed end as found in independent claim 1. For at least the foregoing reasons, Applicant respectfully submits that independent claim 1 distinguishes over Akachi in view of Kato and requests that the 35 U.S.C. 103(a) rejection of independent claim 1 be withdrawn.

Independent claims 3 and 10 have been amended to include the features of "wherein the low-profile extrusion includes a first arcuate portion extending from the generally planar portion to the first sealed end, and a second arcuate portion extending from the generally planar portion to the second sealed end, the first arcuate portion and the second arcuate portion forming segments of a generally circular body portion, each of the first arcuate portion and the second arcuate portion having the same generally constant arc radius measured from a common focus point central to the generally circular body portion." For similar reasons as those discussed with respect to independent claim 1, Applicant respectfully submits that independent claims 3 and 10 distinguish over Akachi in view of Kato and requests that the 35 U.S.C. 103(a) rejections of independent claims 3 and 10 be withdrawn.

Claims 16-18 are dependent upon and include the features of their respective independent claims 1, 3, and 10. For at least the reasons discussed with respect to independent claims 1, 3, and 10, Applicant respectfully submits that claims 16-18 also distinguish over Akachi in view of Kato and requests that the 35 U.S.C. 103(a) rejections of claims 16-18 be withdrawn.

Claims 2, 4, 7-9 and 11-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Akachi in view of Kato as applied to the claims above, and further in view of U.S. Patent No. 6,315,033 to Li. Claims 2, 4, 7-9, 11-12 and 14-15 are dependent upon and include the features of their respective independent claims 1, 3 and 10. As discussed with respect to independent claims 1, 3, and 10, Akachi in view of Kato fails to teach or suggest the features of independent claims 1, 3, and 10. Li describes a heat dissipating conduit having a heat dissipating fin plate arranged therein or around the perimeter thereof. Applicant respectfully submits that Li fails to teach or suggest at least the aforementioned distinguishing features of independent claims 1, 3, and 10.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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